

CoinGecko Quarterly Report



for Q1 2020

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Analysts:



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Founders' Notes

Q1 2020 has been a quarter that we most definitely want to erase from memory. Not only was the world ravaged by the COVID-19 pandemic, we saw massive losses in the stock and crypto market.

On 12 March 2020, Bitcoin went down a massive 40% in one day, touching a low of \$3,800 in what traders called Black Thursday. Ethereum suffered the same fate, going down 45% reaching a low of \$86 on the same day causing all kinds of problems on the Maker platform, affecting Decentralized Finance (DeFi) services.

Cryptocurrency exchanges saw trading volumes go through the roof with this sudden increase in volatility. Many market makers, however, were caught off guard and order books became very thin during this period. Liquidations happened on a massive scale and Bitmex saw its insurance fund increased to a massive 36,493 BTC in this aftermath. However, with every massive drop in price, there is always an opportunity to buy cryptocurrencies for cheap.

CoinGecko has been busy throughout Q1 where we made two big releases. The first big release was the publication of "How to DeFi", the world's first book on Decentralized Finance (DeFi). In this book, we simplified the various parts of DeFi and provided explanations with step-by-step guides to help you get started with various DeFi applications.

The second main release was the launch of CoinGecko Earn. CoinGecko Earn provides an overview of the various centralized and decentralized lending platforms. CoinGecko Earn allows you to easily compare lending rates offered by these platforms and makes it easy for you to increase your returns.

As we enter Q2, we at CoinGecko hope that the COVID-19 situation will subside bringing certainty in the market. We will be launching several new initiatives so do stay updated as we roll out these new features. We wish you the best of health and stay safe!



Bobby Ong
COO

TM Lee
CEO

Crypto Markets (Spot)

Market Dynamics

Market capitalization shrank marginally as COVID-19 panic hits

-5.03%

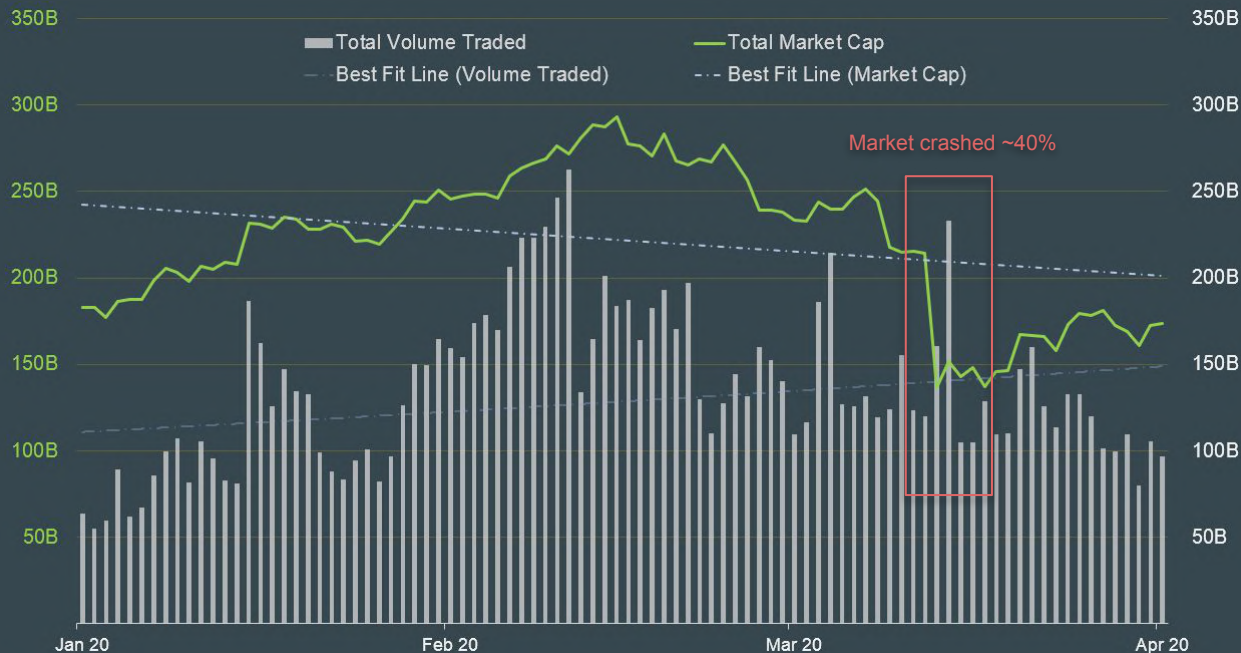
Total Mkt Cap decrease in Q1 2020

Uncertainties in the global markets wiped off all gains made at the start of the year and closed Q1 2020 with a loss.

The market started strongly and rallied to nearly \$300 billion in market capitalization. However, it began declining in mid-February due to global uncertainties. COVID-19 panic crashed the market further in mid-March.

Trading volumes declined as markets trended downwards from mid-February. During the most volatile days when the market crashed **over 40%**, trading volumes spiked.

Crypto Market Capitalization & Trading Volume Q1 2020



Crypto Spot Market Overview

Crypto still positive (+11.9%), BSV: Big Surprise Victory

+11.9%

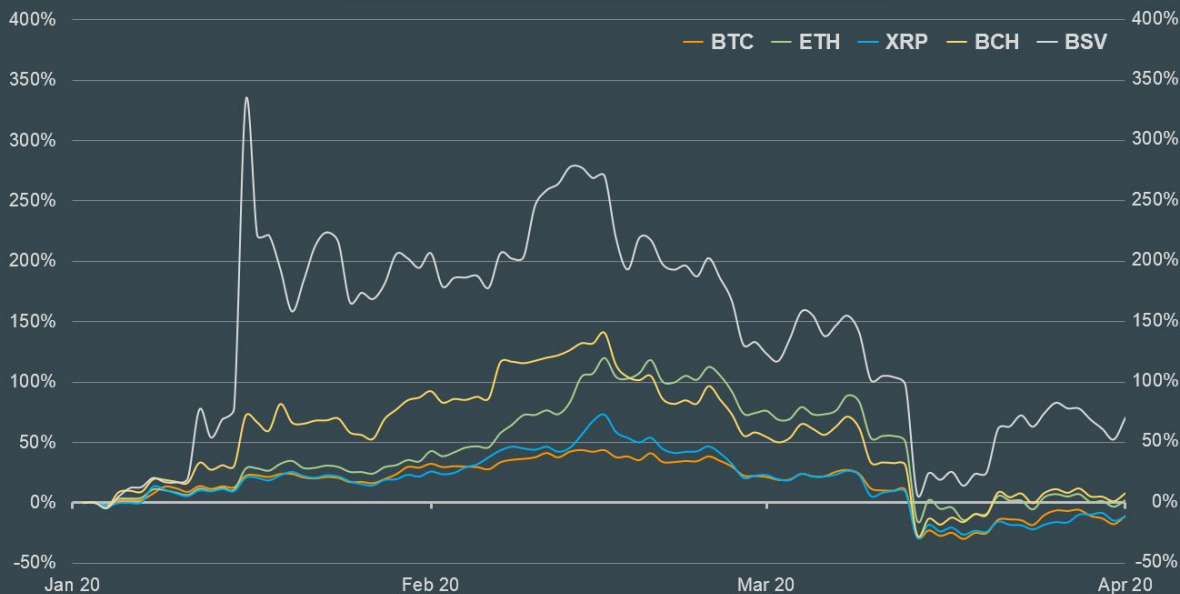
Avg. Top-5 coins returns in Q1 2020

Among top 5 coins, Bitcoin SV (BSV) was the most surprising gainer in Q1 with a **70% gain**. The gains came as rumours spread of Craig Wright having access to Satoshi's Bitcoin private keys.


Bitcoin (BTC) was the biggest loser with a **11% loss**, followed closely by XRP (XRP) with a **10% loss**.

Bitcoin Cash (BCH) and Ethereum (ETH) both fared relatively well with minor **7.1%** and **3.1% gains** respectively.

Top-5 Coins Q1 2020 Price Change (%)



 **-11%**

 **+3.1%**

 **-9.9%**

 **+7.1%**

 **+70%**

Investors move from Bitcoin to US Dollars to preserve capital

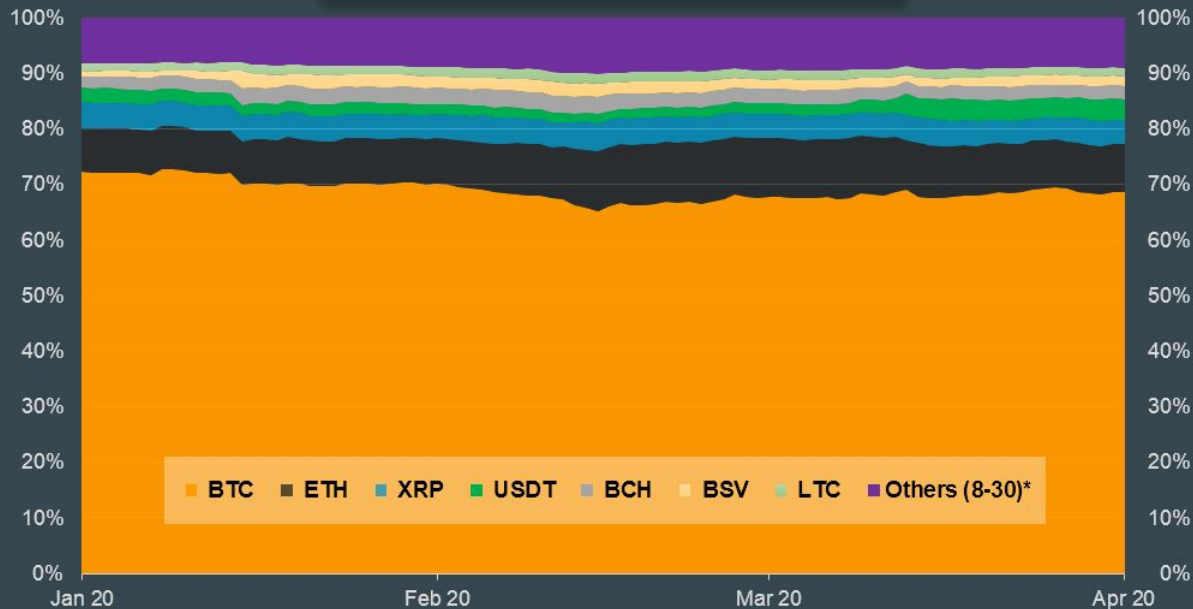
Among the top 30 cryptocurrencies, Bitcoin lost significant dominance (-3.5%) in Q1, going from 71.3% to 67.8%.

Tether was the biggest winner (+1.1%) as its supply increased by nearly 1.5 billion in Q1, bumping its market capitalization from \$4.7 billion to \$6.2 billion.

ETH and BSV both had a relatively good Q1 with a gain of +0.8% dominance. BCH and LTC also gained, although to a lesser degree.

XRP also lost ground in Q1 2020 with a marginal dominance loss of -0.2%.

Top-30 Coins Q1 2020 Market Cap Dominance (%)



Q1 2020 vs Q4 2019  **67.8%**
(-3.5%)

 **8.47%**
(+0.8%)

 **4.40%**
(-0.2%)

 **3.66%**
(+1.1%)

 **2.32%**
(+0.3%)

 **1.75%**
(+0.8%)

 **1.46%**
(+0.02%)

 **8.90%***
(+0.9%)

COVID-19 & Crude oil price war erased initial gains of Q1 2020

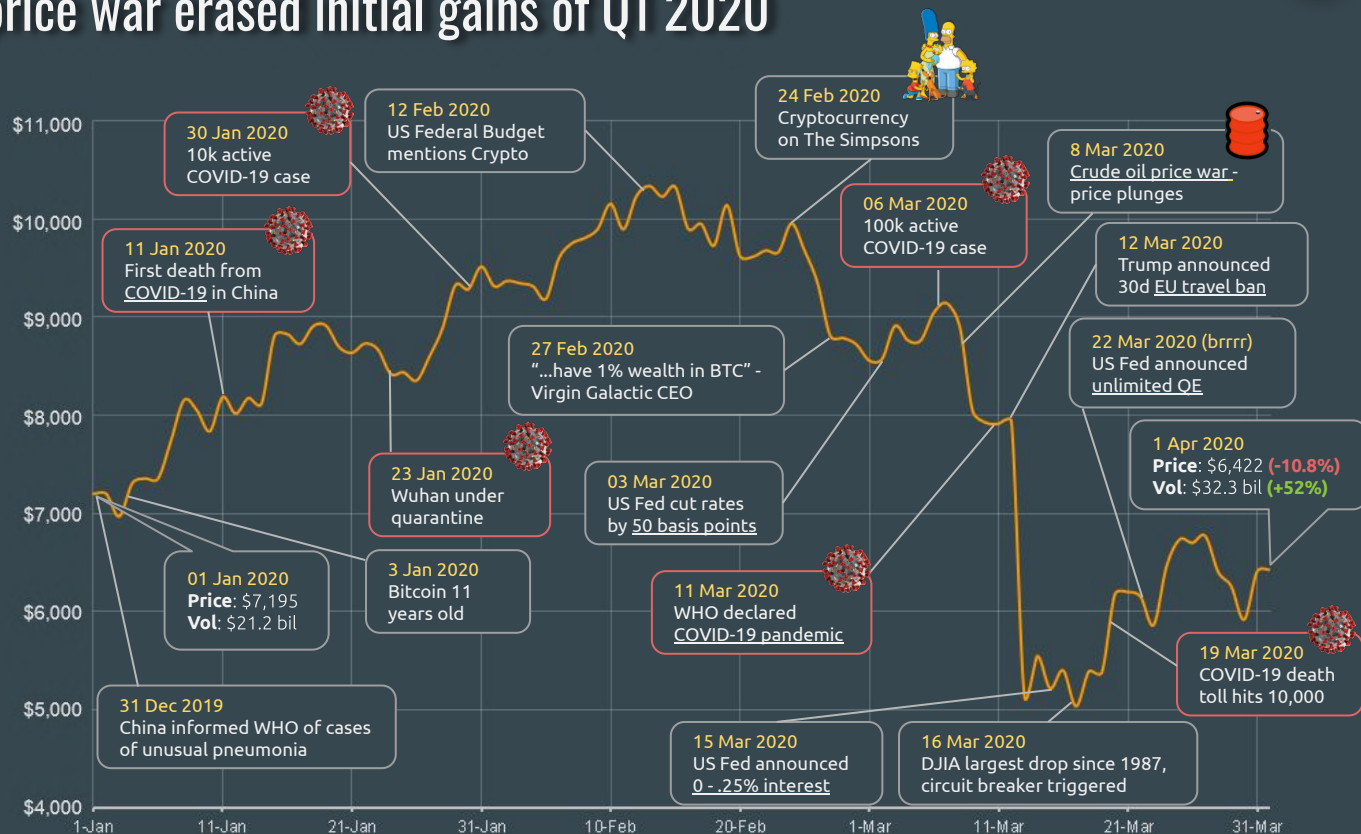
-10.8%

BTC Price decrease in Q1 2020

In the beginning of 2020, Bitcoin performed exceptionally well, gaining almost **+50%** within the first 50 days of the year.

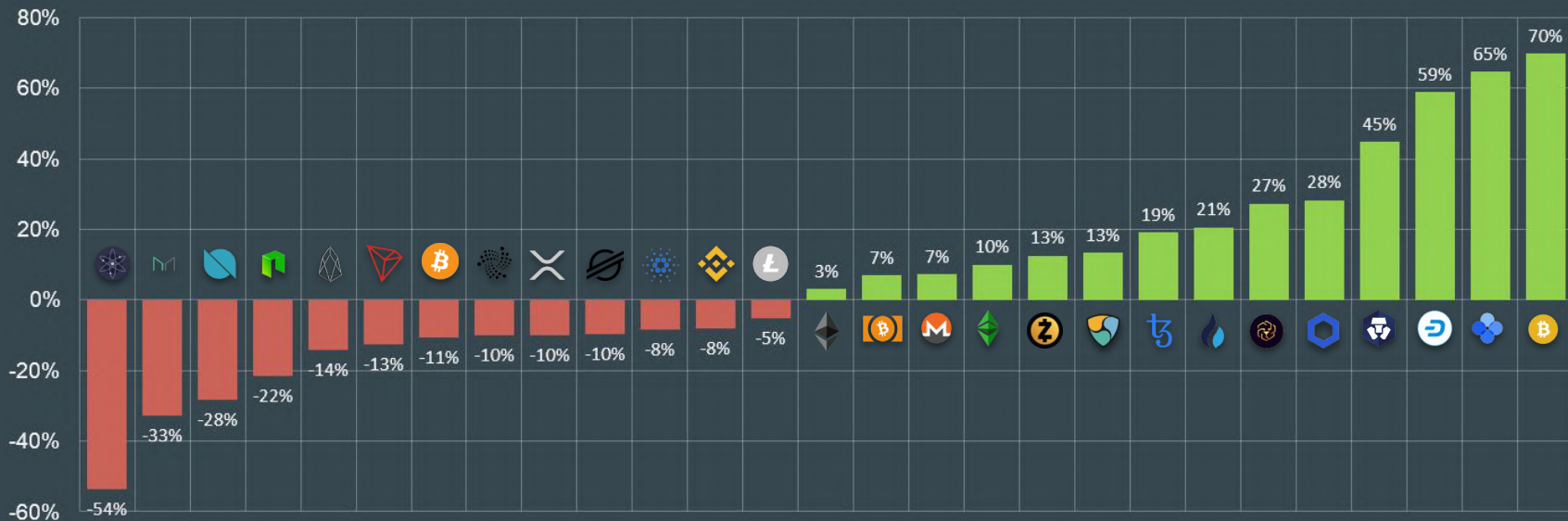
However, as the COVID-19 pandemic spread, so did fear and uncertainty. Markets worldwide tumbled and Bitcoin was no exception - it fell **40%** on 12th March.

Q1 2020 has not been kind to anyone, and was fairly gloomy with the onset of COVID-19 pandemic. We sincerely hope that Q2 onwards will bring about a better 2020!



Top-30 Coins Overview

Cosmos and OKB in the spotlight



What happened to Cosmos?



Cosmos (ATOM) emerged as the biggest loser in Q1.

Cosmos suffered from the departure of multiple high-profile team member such as its CEO, [Jae Kwon](#) as well as Tendermint Labs Director, Zaki Manian, who cited [internal disputes](#) as the main reason for departure.

What happened to OKB?



OKEx's OKB was the biggest winner in Q1.

This was likely due to OKEx's launch of [OKChain Testnet](#), as well as a large reduction in supply as OKEx decided to [burn 700 million OKB](#) which were yet to be issued.

Crypto Markets (Spot)

Stablecoins

Top-5 USD Stablecoins Overview

Stablecoins supply increased by 32.1% to \$7.5 billion

+32.1%

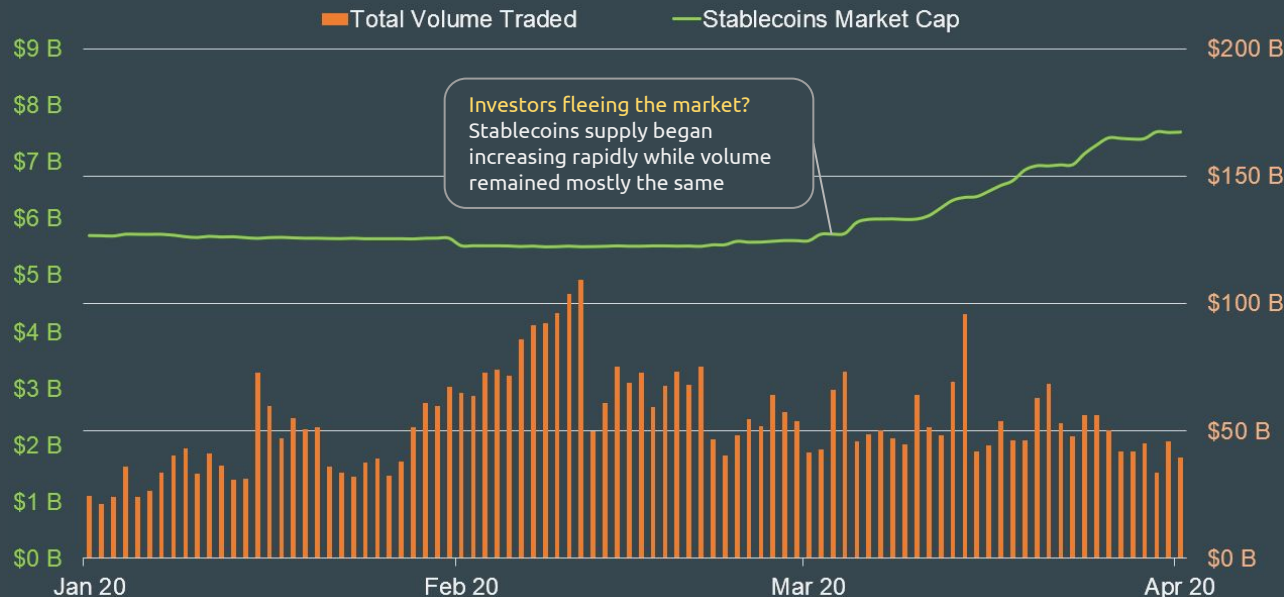
Stablecoins Supply in Q1 2020

Demand for stablecoins skyrocketed in Q1 2020 as market participants sought refuge from the market decline amid a global economic downturn.

Stablecoins supply jumped from \$5.7B to \$7.5 billion **(+\$1.8 billion, +32%)**, mostly from Tether (USDT) whose supply increased by 1.6 billion.

However, despite the increase in supply, there was little change in the overall daily traded volume. It may be an indicator that many traders have decided to sit out of the markets while holding stablecoins to weather out the storm.

Stablecoins Overview Q1 2020



Top-5 USD Stablecoins Velocity

USDT & TUSD were traded over 5 - 10 times their supply

Velocity measures the ratio of a coin's trading volume and market capitalization and can be used to approximate how active a coin is.



USDT and TUSD both have high velocity, but it is worth noting that USDT has a much higher market capitalization than TUSD (84% vs. 2% dominance).

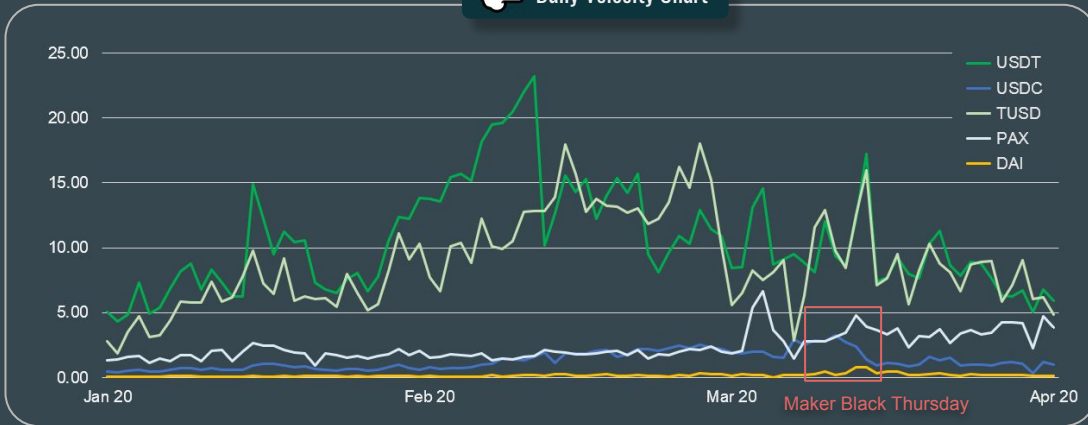


PAX & USDC were roughly equal, up till early March when USDC had a sudden dip in velocity. This was likely linked to Maker's Black Thursday event (we covered this on [page 47](#)), where USDC is used as a collateral to help improve DAI's liquidity.

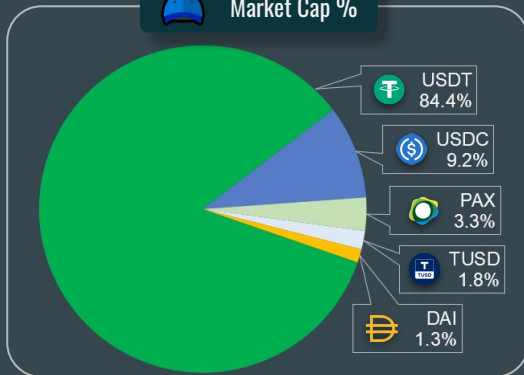


DAI has the lowest velocity - not surprising as a lot of DAI gets locked in DeFi protocols as collateral. This is also evident for USDC as it is increasingly locked onto DeFi protocols while supply increases.

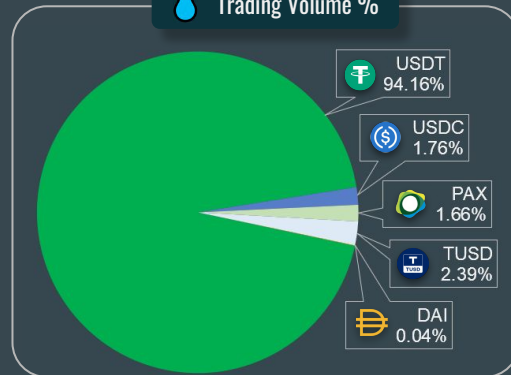
 Daily Velocity Chart



 Market Cap %



 Trading Volume %



* Source: CoinGecko snapshot data on 31 March 2020

Note: DAI combines [SAI](#) and [DAI](#) data.

Top-5 USD Stablecoins Overview

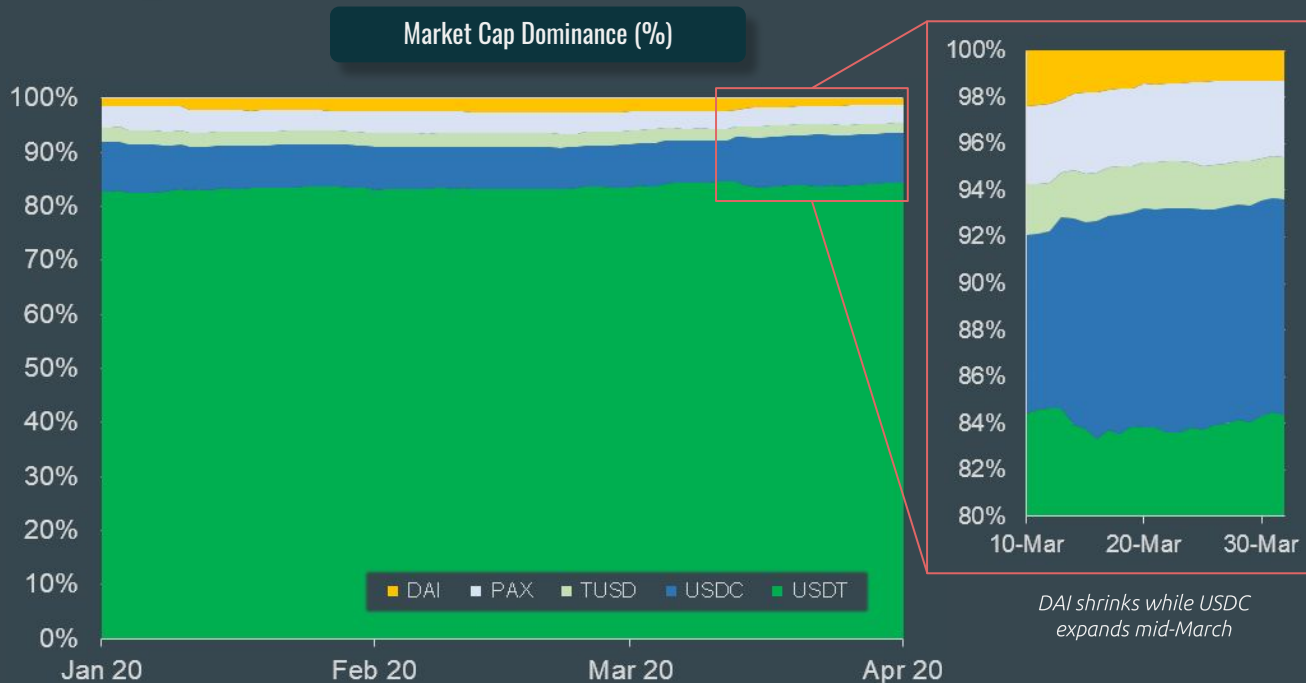
Tether continues exerting dominance in stablecoin market



Tether (USDT) continues to dominate the stablecoin market throughout Q1 2020 and increased its dominance by +1.6%.

DAI had strong growth early in Q1, peaking at 3.52% dominance in February as the DeFi narrative grew. However, its gains were wiped clean during Maker's Black Thursday event on 12th March, which we covered here ([page 47](#)).

Following Maker's Black Thursday event, USDC's supply increased as it was used as a collateral to stabilize DAI, and managed to narrowly avoid losing dominance (+0.05%) to Tether, while the other 3 stablecoins lost fairly significant market share.



Q1 2020 vs Q4 2019  **84.4%** (+1.6%)

 **9.21%** (+0.05%)

 **3.29%** (-0.65%)

 **1.81%** (-0.9%)

 **1.32%** (-0.1%)

Gold Stablecoins Market Dynamics

Gold-backed tokens lag behind gold spot price when liquidity is low

+275%

Gold Tokens Trading Volume Q1 2020

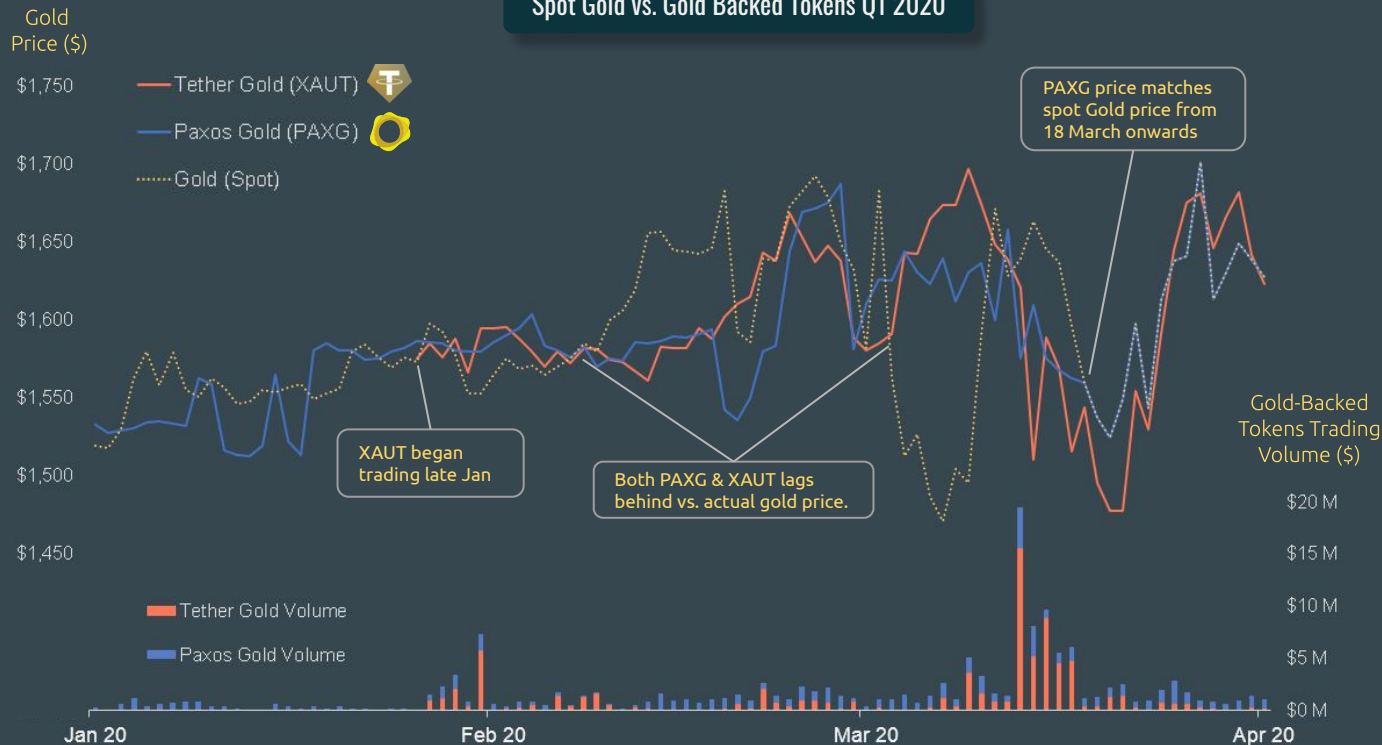
Gold-backed tokens generally lagged behind spot gold prices, especially when trading volume were low.

Towards mid-March, traders sought safe havens and turned towards gold-backed tokens as one of the options.

As trading volumes increased, the price of gold-backed tokens converged closer to spot gold prices.

Both Tether Gold and Paxos Gold correlated much better with spot gold price towards late-March. This is especially true for Paxos Gold whose price very closely matched spot gold prices from 18 March onwards.

Spot Gold vs. Gold Backed Tokens Q1 2020



Crypto Markets (Derivatives)

Market Dynamics

Derivatives - BTC Perpetual Swaps

Trading Volume: Binance Futures takes the crown

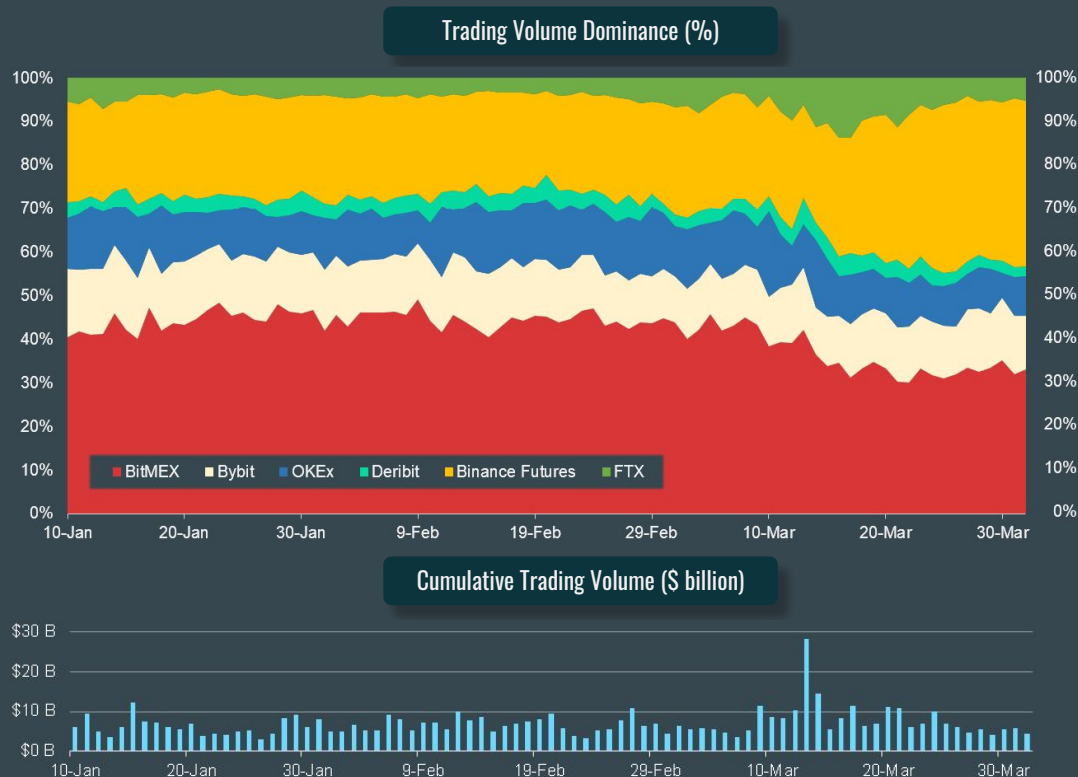


Binance gained significant market share (+15.1%) over Q1 in terms of trading volume for BTC perpetual contracts, ending the quarter as the market leader.

Binance dethroned BitMEX, who lost a fairly significant **-7.5%** trading volume dominance to become the top volume Bitcoin perpetual swap exchange.

Q1 has been painful for everyone else as well. Following closely behind BitMEX would be Bybit **(-3.2%)** and OKEx **(-2.8%)**.

There was a notable spike in trading volume activity on 12th March, when Bitcoin dropped over 40% in a day.



Q1 2020
vs Q4 2019

 **38.0%**
Binance (+15.1%)

 **33.1%**
Bitmex (-7.5%)

 **15.6%**
Bybit (-3.2%)

 **8.9%**
OKEx (-2.8%)

 **5.3%**
FTX (-0.2%)

 **2.2%**
Deribit (-1.5%)

Derivatives - BTC Perpetual Swaps

Open Interest: BitMEX bleeds but still king, Binance & FTX catching up

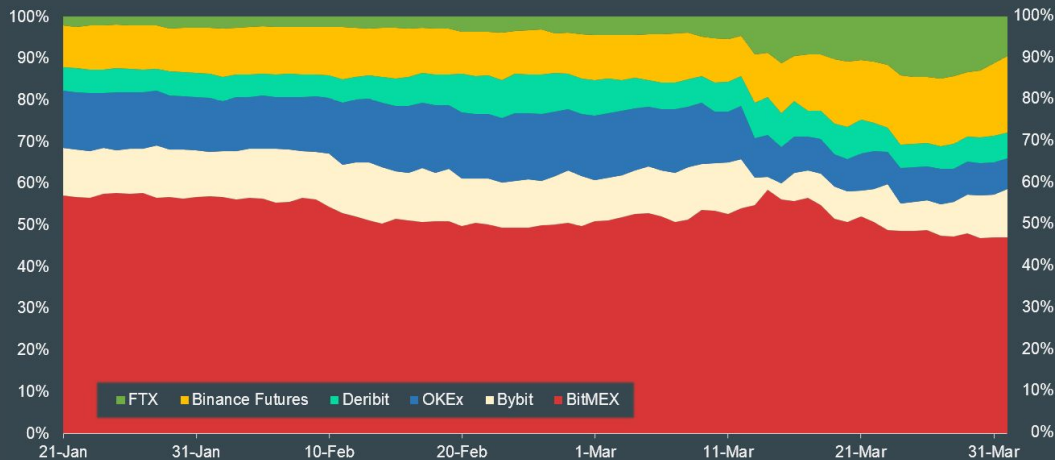


BitMEX ended Q1 with a hefty **-10.2%** loss in open interest dominance, but still dominates nearly half the market with 47% dominance.

Once again, Binance Futures is a big winner in Q1 with a massive growth of **+8.4%** in open interest dominance. FTX followed closely behind as another winner with **+7.4%** gains, more than quadrupling its initial open interest dominance.

It is worth noting that there was a major dip in open interest on 12th March after Bitcoin's 40% dip. After that, trader preferences appear to have shifted towards Binance & FTX.

Open Interest Dominance (%)



Cumulative Open Interest (\$ billion)



Q1 2020
vs Q4 2019

 **47.0%**
Bitmex (-10.2%)

 **18.4%**
Binance (+8.4%)

 **11.6%**
Bybit (+0.3%)

 **9.4%**
FTX (+7.4%)

 **7.3%**
OKEx (-6.5%)

 **2.2%**
Deribit (+0.6%)

Derivatives - BTC Perpetual Swaps

Open Interest: BitMEX still leading the derivatives market

-\$498m

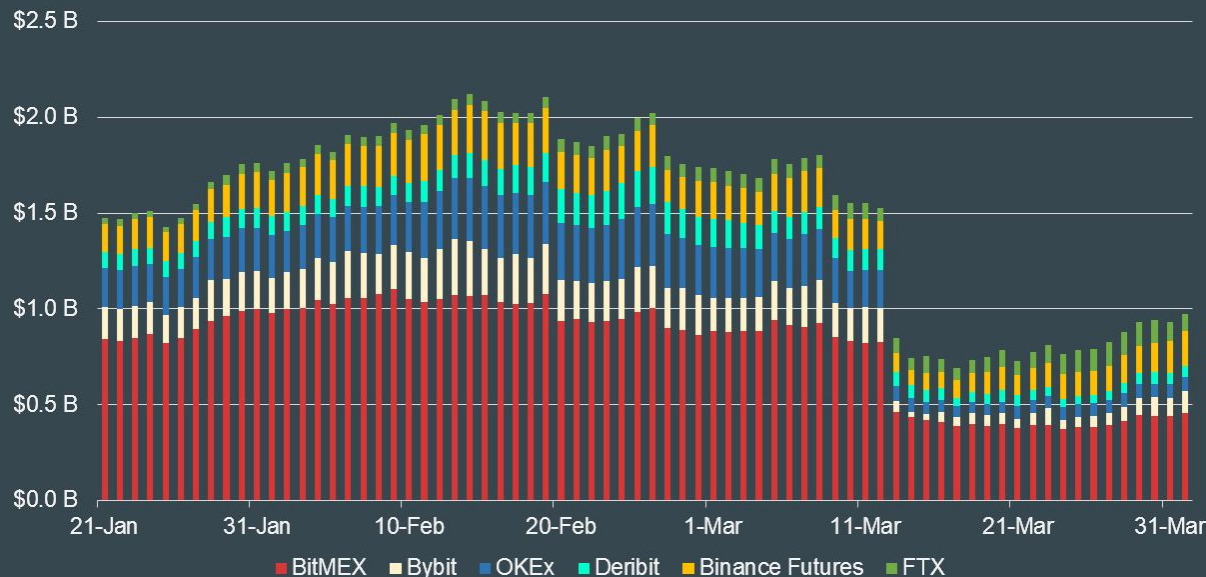
Open Interest Decrease in Q1 2020

Looking at the \$ numbers, BitMEX is clearly still the leader for BTC Perpetual swaps, with close to \$460m in Open interest value remaining despite the massive decrease in Q1.

Two players who did really well in Q1 were Binance and FTX as both rapidly gained ground following BTC market crash on 12th March.

Interestingly, FTX tripled its open interest despite the bearish market outlook.

Open Interest (\$ billion) by Exchange



Q1 2020
vs Q4 2019



\$459m
(-\$384m)



\$179m
(+\$32m)



\$113m
(-\$53m)



\$92m
(+\$62m)



\$71m
(-\$132m)

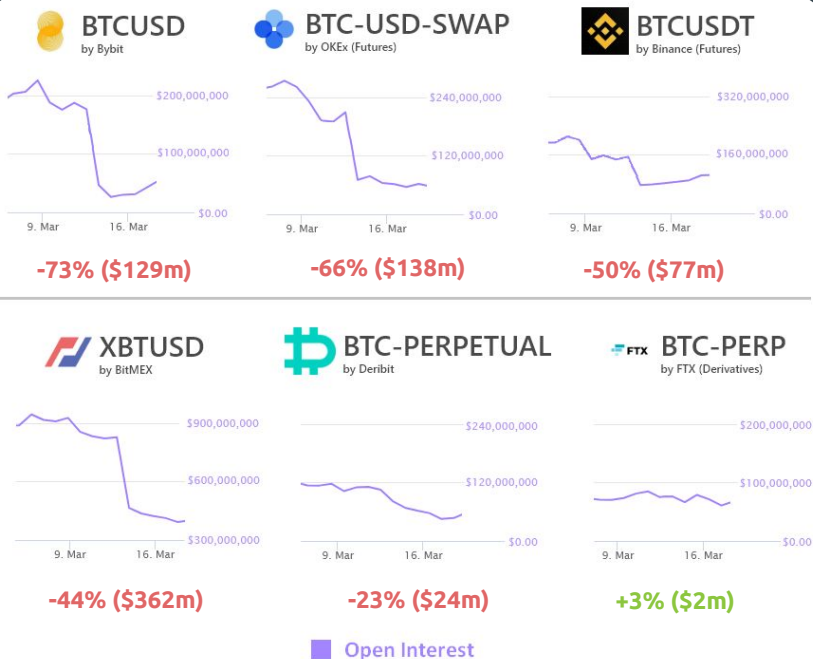


\$61m
(-\$22m)

Derivatives - Black Thursday (12 March 2020)

BTC perpetual swaps open interest fell everywhere except FTX

Open Interest change (%)



On **12th March 2020**, Bitcoin suffered one of largest & quickest price plunges, going from \$7.8k to \$4.9k in ~24 hours time.

This triggered a chain reaction of cascading margin calls & liquidations on bitcoin perpetual swap trading pairs, where traders were forced to close their positions, as evident through the open interest values across exchanges. Two of the hardest hit players were:

BitMEX (dollar-wise) - open interest decrease by **\$362m (-44%)**
Bybit (percentage-wise) - open interest decreased **-73% (\$73m)**

One exchange that beat the trend was FTX, which had saw a minor bump of **\$2m (+3%)** to its open interest.



Open Interest

The total number of active derivative contracts held by market participants.



Liquidation

When a trader's position has to be closed due to the lack of margin to cover the position.



...Swaps?

Not sure about Perpetual swaps?
We got you covered - read on!



Market Dynamics - Derivatives

An Introduction to Perpetual Swaps



A Perpetual Swap is a form of futures contract with **no expiry date**.



You trade against another trader and not the exchange itself.



Because there is no expiry date, **funding mechanism** anchors the contract price to the spot price.



Flexibility: Perpetual Swap has 3 settlements per day*, users can withdraw their funds right after the settlement, allowing users to use funds more flexibly.

Example:
BTC Spot
\$10,000

Open a 1 BTC Long Position

If you expect BTC price to **increase**

Open a 1 BTC Short Position

If you expect BTC price to **decrease**

During settlement,
if **BTC Spot**
\$12,000

If you opened a Long Position
= **Profit \$2,000**



Profit & Loss will be realized after settlement*

If you opened a Short Position
= **Loss \$2,000**

* Settlement on Huobi DM happens 3 times per day: 04:00,12:00,20:00 (GMT+8)



Huobi DM (Huobi Futures), the digital asset derivative trading platform under Huobi Group, on 27 March 2020 launched Perpetual Swaps for BTC, ETH, BCH, BSV, EOS, LTC, XRP, ETC, TRX, LINK.

Benefits

- Well-perform System & Stability
- Mature Risk Control
- Asset Safety
- Low Trading Fees
- User-friendly Service
- Insurance Funds (to prevent clawbacks)

Sponsored

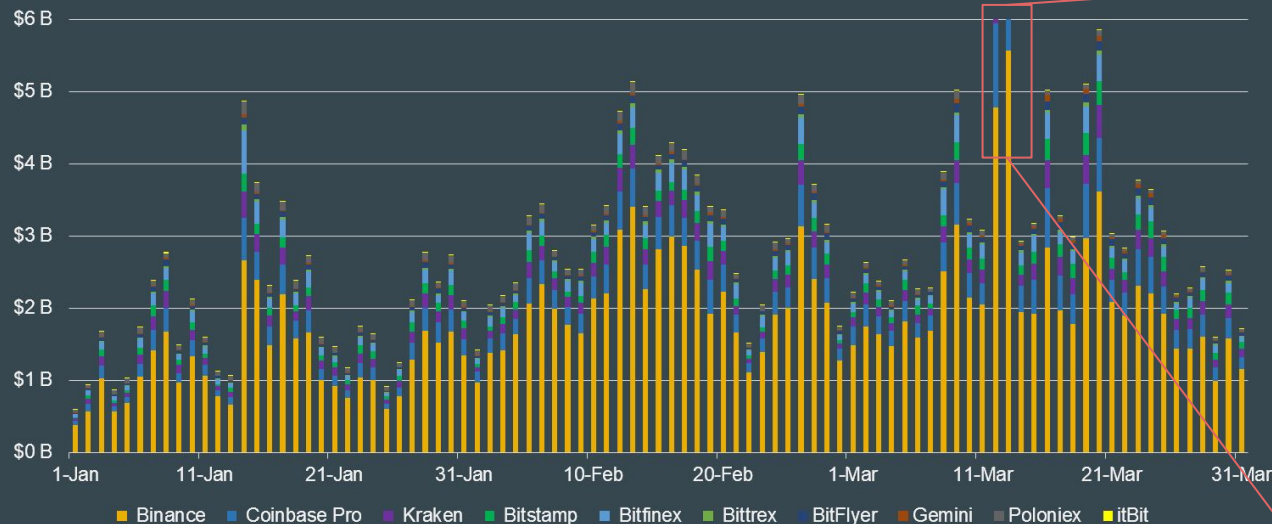
[Click for more Info](#)

"Sell shovels in a Gold Rush"

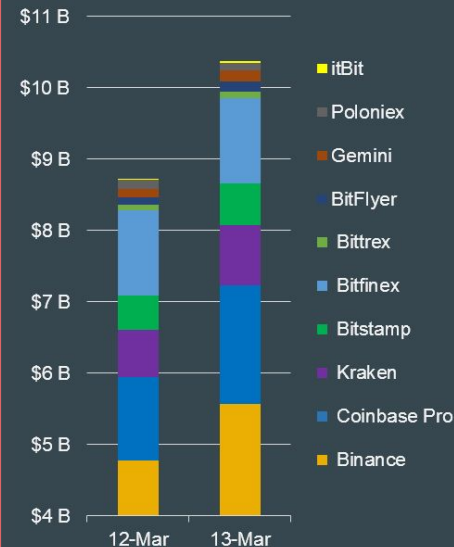
Crypto Exchanges

Binance dominates 50-75% of real spot trading volume

Trading Volume (\$ billion) by Exchanges



Cut-out view for volumes above \$6 billion

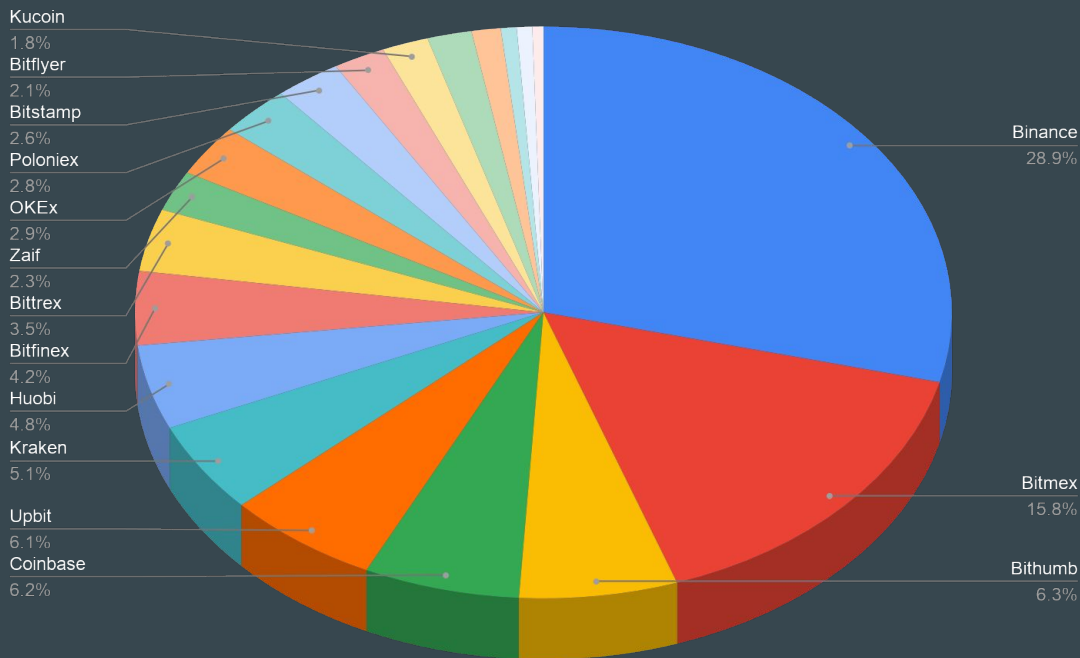


Trading volumes for Bitwise 10 real volume exchanges have grown ~3x since the start of the year from a cumulative **\$600 million to \$1.7 billion**. Trading volumes peaked at a total of **~\$10 billion** on **12th March, the day Bitcoin fell over 40%**.

Binance maintained its dominance among Bitwise real volume exchanges, ranging between **50% - 75% dominance** throughout the Q1 2020.

Binance dominates market share by web traffic

Top 20 Exchanges Traffic Q1 2020



Binance obtained the most web traffic amongst all exchanges in Q1 2020. Binance obtained a total of **66.6 million pageviews**, **over 4 times larger** than Bithumb, Coinbase, or Upbit.

Binance had over ¼ of the top 20 exchanges web traffic, by far the largest percentage.

Bitmex is the most popular derivative exchange, obtaining 36.3 million pageviews or roughly 15.8% of all crypto web traffic to top 20 exchanges in Q1 2020.

Crypto Exchange Tokens

Exchange tokens weathered the market uncertainty relatively well

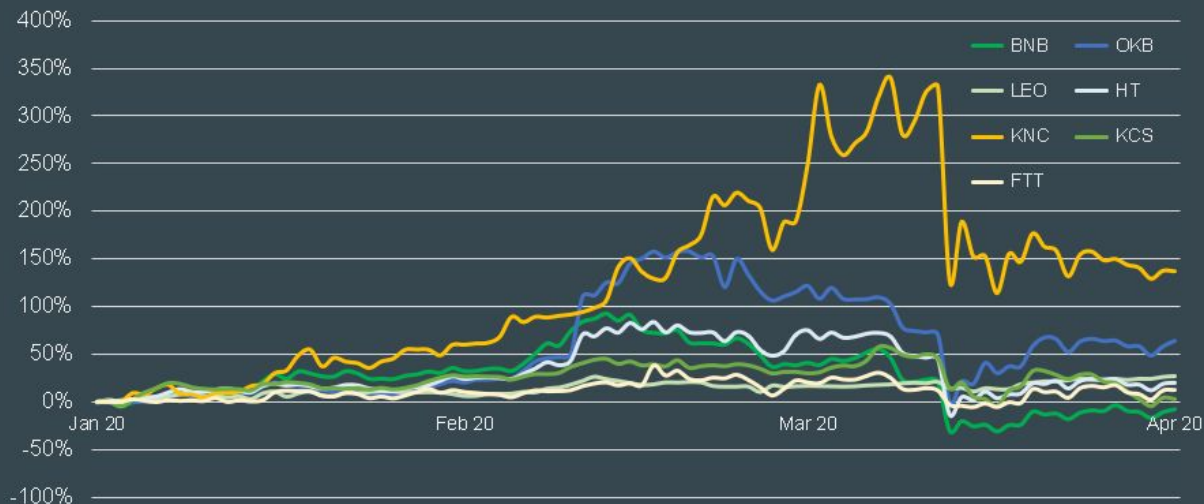
+25.7%

Average Top-7 Exchange Tokens
Returns in Q1 2020

Among top 7 exchange tokens by market capitalization, Kyber Network (KNC) performed the best with a **136% gain** in Q1 2020. This was due to Kyber's upcoming protocol upgrade called Katalyst scheduled for Q2 2020. Katalyst will enable protocol governance through KyberDAO.

Overall, exchange tokens seem to weather the price decrease in the wider cryptocurrency markets relatively well as trading volume increased tremendously for these exchanges during periods of high volatility.

Top-7 Exchange Tokens Q1 2020 Price Change (%)



BNB

-8.1%



OKB

+64.7%



LEO

+27.3%



HT

+20.6%



KNC

+136%



KCS

+2.6%



FTT

+12.3%

Huobi Token and OKB saw large burns pushing price up in Q1

Logo	Exchange	Ticker	Total Token Supply	Total Burned	% Burned (Total)	% Burned (Q1)	Price (31 Mar 2020)	Price Growth (Q1 2020)	Market Cap (31 Mar 2020)	Market Cap Rank (31 Mar 2020)	SimilarWeb (Q1 2020)	SimilarWeb (Q1 Growth)
	Binance	BNB	200 m	16.7 m	8.4%	1.1%	\$12.60	-8.1%	\$1.91 b	9	66.6 m	135%
	OKEx	OKB	300 m	17.1 m	5.7%	1.1%*	\$4.31	+64.7%	\$1.22 b	11	6.7 m	120%
	Bitfinex	LEO	1 b	16.1 m	1.6%	0.6%	\$1.04	+27.3%	\$1.02 b	16	9.6 m	129%
	Huobi	HT	500 m	197 m	39.5%	31.1%	\$3.31	+20.6%	\$772 m	17	11.0 m	165%
	Kyber Network	KNC	226 m	14.7 m	6.5%	0.4%	\$0.44	+136%	\$78 m	50	0.2 m	158%
	Kucoin	KCS	200 m	28.1 m	14.1%	0.3%	\$0.93	+2.6%	\$76 m	56	4.2 m	115%
	FTX	FTT	350 m	3.36 m	1.0%	0.4%	\$2.41	+12.3%	\$70 m	59	2.3 m	312%

Exchange Tokens with its regular burns based on exchanges' revenue/profits most resemble traditional stocks with its share buybacks. This makes it possible for analysts to use traditional financial models such as DCF and P/E ratio in evaluating exchange tokens. Exchanges earn most of their revenue from trading fees. The increase in volatility and trading volumes in Q1 suggest that exchange tokens hold steady in anticipation of larger burns in the future.

In Q1, OKB and HT both saw huge price increases as both OKEx and Huobi followed the lead of Fcoin, a now-defunct Chinese exchange in burning large amounts of exchange tokens. OKEx announced a [burn of 700 million unissued OKB](#) equating to 233% of the existing total supply of OKB. Huobi also announced their decision to [burn 147 million HT](#) on 1 March equating to 30% of its total supply.

Traditional Markets

Market Dynamics

Traditional Market Dynamics

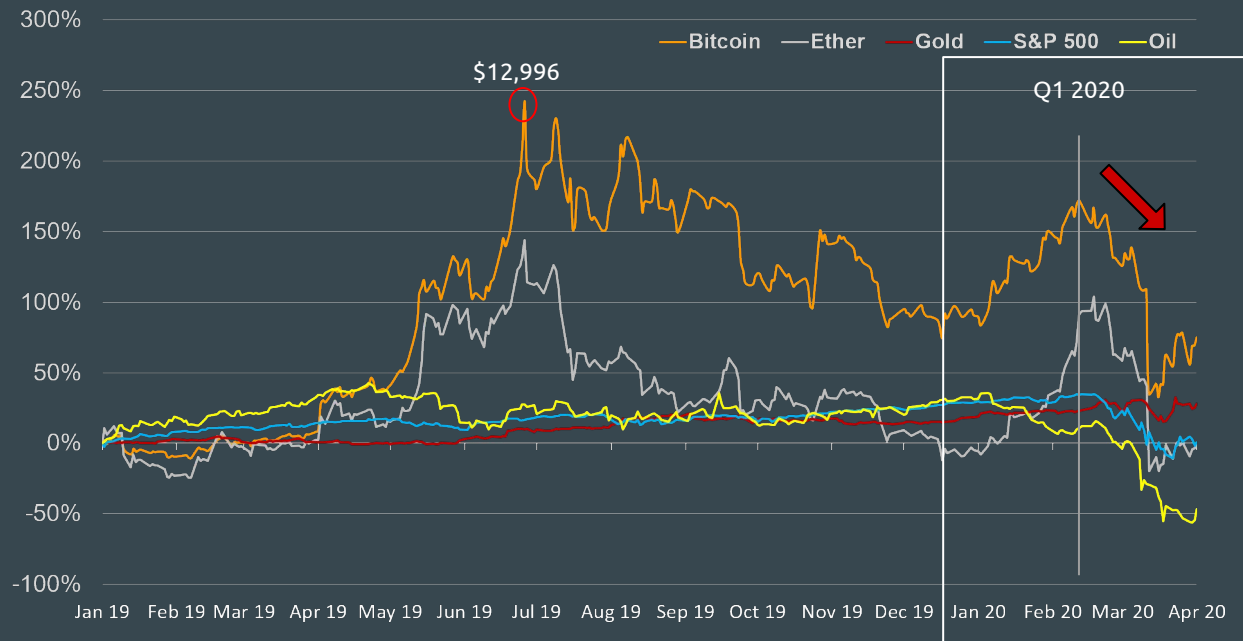
Over 1 year period, the biggest gainers were Bitcoin (56%) and Gold (24%)

% Price Changes (Jan 2019 - Mar 2020)

Over the past 1 year period (1 April 2019 to 31 March 2020), Bitcoin gained the most by over **56%**. Gold followed closely behind with a gain of **over 24%**.

During this period, Ether went down by **7%**, S&P 500 fell by **10%** and crude oil fell by **67%**.

The COVID-19 pandemic in Q1 2020 has erased the entire stock market gains in 2019.



Traditional Market Dynamics

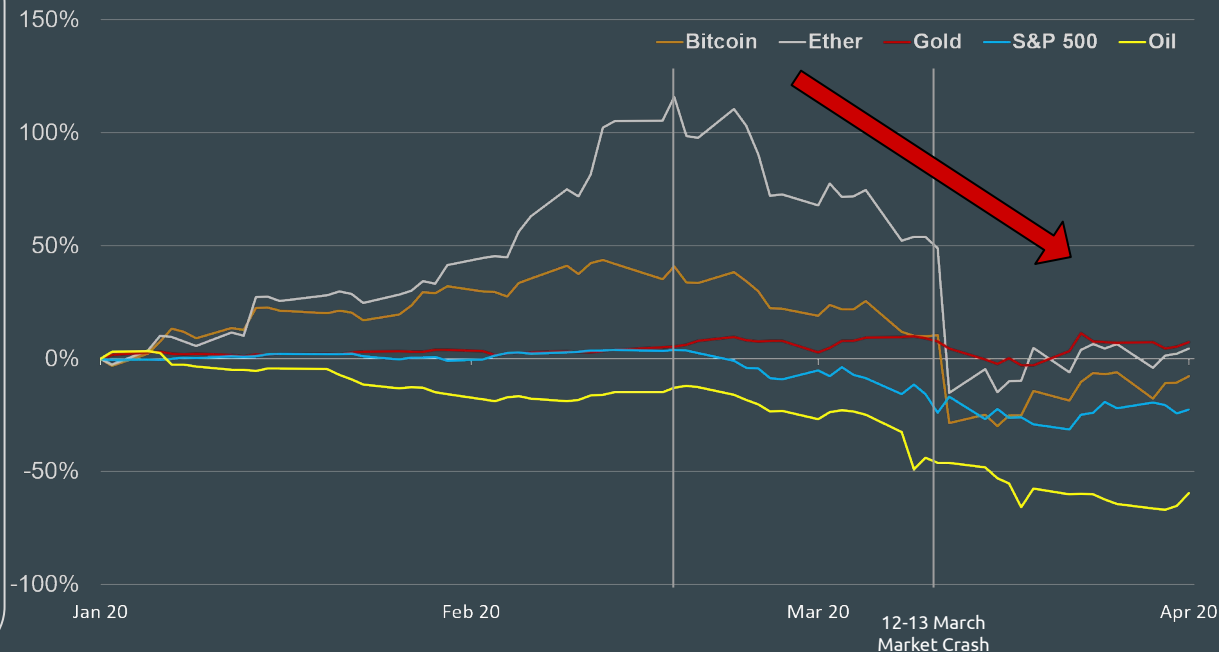
All asset classes had initial gains at the start of Q1 2020 but fell as COVID-19 panic hits the market

In Q1 2020, all asset classes saw major gains till mid-Feb with the following performance - S&P 500: **+4%**, BTC: **+41%**, Ethereum: **+116%**, Gold: **+5%**. The major exception was Oil: **-13%**.

Markets began declining from 19 Feb and this was further exacerbated on 9 March when crude oil fell by over **25%** due to the oil price war between Russia and Saudi Arabia.

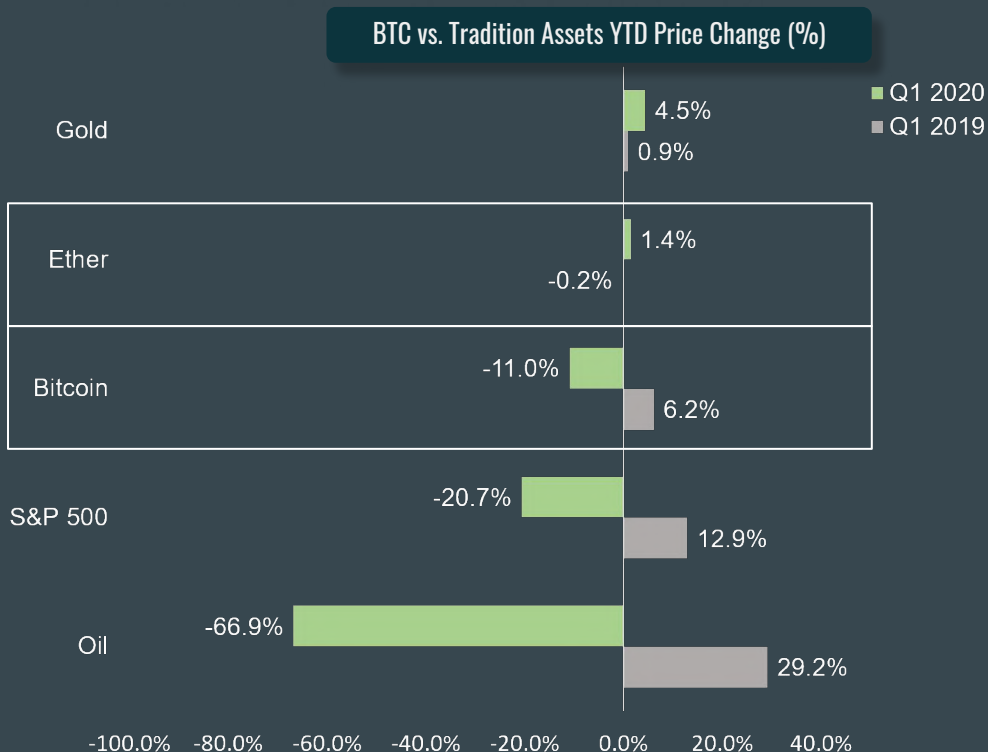
On 12-13 March, COVID-19 fear hit the U.S stock market hard with S&P 500 going down **10%** on March 12 before flagging up **9%** the next day. Bitcoin and Ether were affected more plunging **40%** and **45%** respectively during intra-day trading.

Q1 2020 Price Changes (%)



Traditional Market Dynamics

Although Bitcoin crashed by over 40% on 12-13 March, it only declined by 11% in Q1 2020



The only gainer for Q1 2020 was Gold (**+4.5%**) and Ether (**+1.4%**), which performed much better than Q1 2019.

The biggest loser in Q1 2020 was Crude Oil (**-66.9%**).

Worth noting that despite Bitcoin plummeting by **40%** on March 12th (COVID-19 induced price decline on the U.S. market), it actually fell only by **11.0%** in Q1 2020 and outperforming S&P 500 (**-20.7%**).

Traditional Market Dynamics

Gold is known as a safe haven during past major crises. However, current correlation suggest it may not be this time.

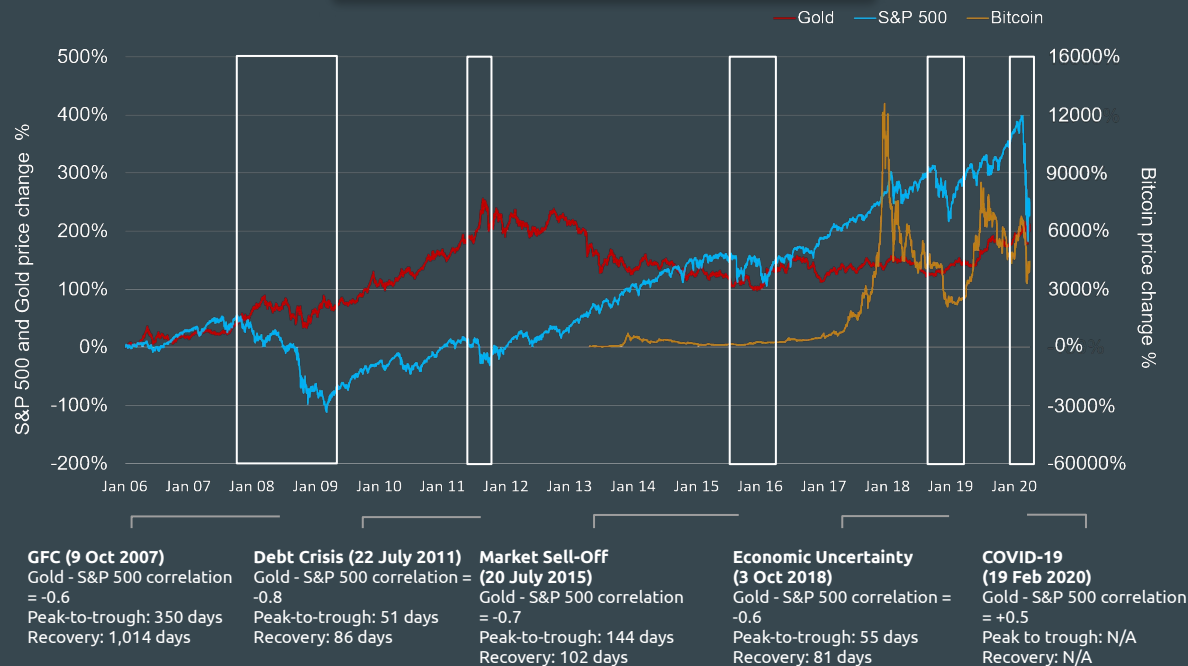
Over the years, Gold has been known as the “safe haven” asset whenever a crisis happens.

Looking at historical correlation between Gold and S&P 500 from January 2006, 30-day static correlation suggests that Gold has a **short-term negative relationship** during the major financial crises.

30-day static correlation between Gold and S&P 500 during the COVID-19 event in Q1 2020 was the **only positive correlation**. This may possibly be because Gold was sold off to meet margin calls on other leveraged positions.

It must be noted that Gold had an overall positive long-term relationship with the S&P 500¹.

Gold, S&P 500 and Bitcoin Price Changes (%)



¹ Correlation Gold-S&P 500: 5 years = 0.7; 2 years = 0.5, 1 year = 0.5
Source: CoinGecko, Yahoo Finance

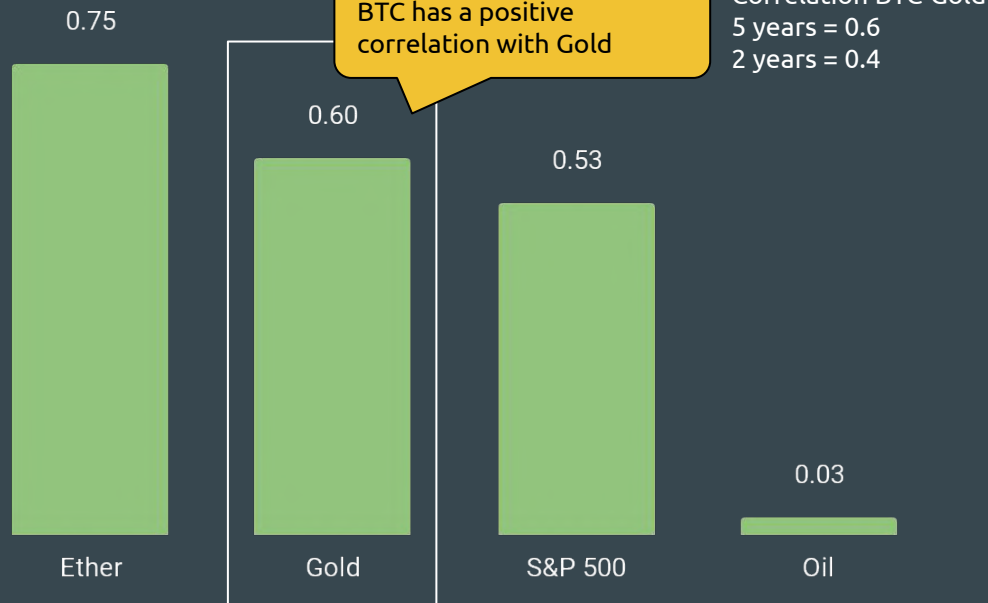
Bitcoin maintains consistent positive correlation with Gold

If Gold is a safe haven and Bitcoin has a strong positive correlation to Gold, does that make Bitcoin a safe haven too?



CoinGecko [Twitter poll](#) revealed that 63% of respondents believe that Bitcoin is a safe 'haven'.

BTC 1 Year Correlation

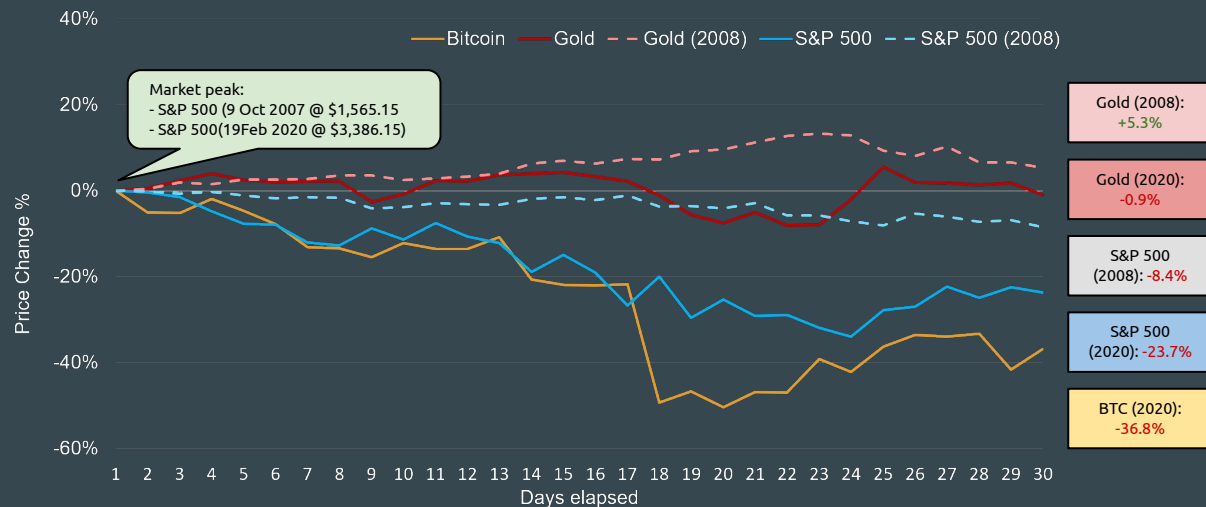


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Traditional Market Dynamics

Bitcoin fell by 37% while Gold remained as a safe haven, falling by only 1%. This suggests a decoupling between the two assets.

Peak-to-trough first 30 days in COVID-19 vs GFC 2008



	Gold	S&P 500
30-day correlation to Bitcoin	0.59	0.90

Gold contracted marginally by **1%** within 30 day post COVID-19 market panic. It performed better during GFC 2008, gaining **5.3%**.

S&P 500 fell **3 times faster** during the COVID-19 panic compared to GFC 2008. It is likely due to the economic impact being structural during the pandemic as social distancing halts global economic activity.



Bitcoin has a high 30-days positive correlation to S&P 500 at 0.9. This is much higher than the 0.6 correlation to Gold. As stocks declined (**-23.7%**), Bitcoin declined as well but in a more severe manner (**-36.8%**).

Traditional Market Dynamics

Looking at the oil market, Bitcoin has a high short-term correlation with crude oil but they are hardly correlated in the long-term

Bitcoin has a positive 5 year correlation with crude oil. However we conclude that it was a coincidence between the ICO-bubble and Oil being in an expansion mode in 2017-2018.

Taking out the ICO-bubble, there is no correlation between the two assets when we look at the correlation in the past 1 and 2 years.

Crude oil has been declining since the start of 2019 and the stock market began to decline mid-February. The conflict between OPEC and Russia on 9 March and the COVID-19 panic caused everything to correlate to each other, including between BTC and crude oil.

We predict that oil price fluctuation would unlikely to affect Bitcoin in the long term.

Oil vs Bitcoin Price Change (%)



Years	5Y	2 Y	1Y	YTD
Correlation BTC-OIL	0.6	0.06	0.04	0.9

Traditional Market Dynamics

Rest of the world are in the red, except Ethereum which gained +1.4% YTD

Markets around the world declined in Q1 2020 except for Ethereum which gained by **1.4%**.

Bitcoin outperformed traditional markets across the global with a decline of **11%**. However both quarterly figures from Bitcoin and Ethereum mask the deep intraday drop of **40%** and **45%** respectively on 12 March 2020.

Asian markets were less impacted than the European and American markets. This may be due to the pandemic hitting them earlier and they were more prepared at handling COVID-19.

We foresee the American market declining further as the COVID-19 virus is still at an early stage.

World stock market price change % Q1 2020 vs Q1 2019

U.S. DJIA
Q1 2020: **-21%**
Q1 2019: **+13%**

U.K. FTSE
Q1 2020: **-25%**
Q1 2019: **+8%**

Russia RTSI
Q1 2020: **-35%**
Q1 2019: **+10%**

Bitcoin (BTC)
Q1 2020: **-11%**
Q1 2019: **+6%**

Ethereum (ETH)
Q1 2020: **+1.4%**
Q1 2019: **-0.2%**

China SHANGHAI COMPOSITE
Q1 2020: **-11%**
Q1 2019: **+25%**

Japan NIKKEI
Q1 2020: **-18%**
Q1 2019: **+8%**

Germany DAX
Q1 2020: **-26%**
Q1 2019: **+9%**

France CAC 40
Q1 2020: **-27%**
Q1 2019: **+14%**








Hong Kong HANG SENG
Q1 2020: **-17%**
Q1 2019: **+16%**

South Korea KOSPI
Q1 2020: **-19%**
Q1 2019: **+7%**

Brazil BOVESPA
Q1 2020: **-38%**
Q1 2019: **+5%**

Traditional Markets: COVID-19 Induced Recession

Will it hit the global economy harder than SARS (2002) & GFC (2008)?

	SARS 	Global Financial Crisis (2008) 	COVID-19 
Period	Nov 2002 - July 2003	October 2007 - Mar 2013	December 2019 - N/A*
S&P 500 Peak-Bottom	Peak: 27 Nov 2002 Bottom: 11 Mar 2003 104 days (-15%)	Peak: 9 Oct 2007 Bottom: 9 Mar 2009 517 days (-57%)	Peak: 19 Feb 2020 Bottom: 23 Mar 2020* 33 days* (-34%)
S&P 500 Recovery	43 days	1,014 days	N/A*
What we know:	 S&P 500 went down by 15% when the SARS pandemic occurred.  However, SARS was unlikely the main factor as the <u>US-Iraq war</u> was looming as well.  There were <u><30 cases</u> in United States and 92% of cases were in Asian countries	 GFC had a systemic risk which threatened the entire financial system and it was reported rather too late. GFC led to a domino effect and impacted the global economy and the market had a harder time recovering as compared to SARS.	<p>COVID-19 is likely to take a longer period to contain than SARS because it has a higher infection rate and has already <u>surpassed SARS cases</u> within 2 months of its outbreak.</p> <p>Countries worldwide have announced stimulus packages such as cash handouts, unemployment benefits, tax cuts and more. It remains to be seen whether these stimulus packages can provide adequate relief to the economy.</p> <p>It is still an ongoing battle and a seemingly tougher one. We already know that <u>job losses soared</u> to record levels in the U.S. a month after COVID-19 hit, and there may be more to come.</p>

*While the markets may appear to be cooling off after a rapid drop, we do not know if 23rd March 2020 is truly the bottom. Figure shown based on data available as of 1st April 2020.
Source: CoinGecko, Yahoo Finance

DeFinitely don't miss this section

Decentralized Finance (DeFi)

Decentralized Finance (DeFi)

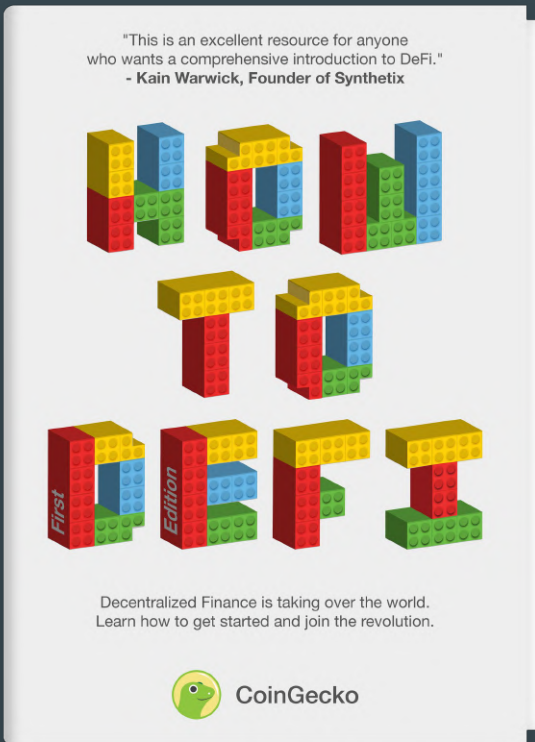
"How to DeFi" Book

"How to DeFi" Book

In March 2020, we published the world's first Decentralized Finance (DeFi) book. This book contains 26,000+ words in 212 pages and provides an overview of the DeFi ecosystem with step-by-step guides in using the various popular DeFi apps.

Retail: \$14.99 **Grab a complimentary copy today!**

Don't be shy, go ahead and click on it!  is our pleasure to share this guide with all of our supporters (*especially you!*) to help everyone navigate the booming DeFi scene.



"This is an excellent resource for anyone who wants a comprehensive introduction to DeFi."
Kain Warwick, Founder of Synthetix



"If I didn't know anything about DeFi and needed to learn from scratch, this book is where I'd start."
Felix Feng, CEO of TokenSets



"This book details the new economies created by a generation of bankless pioneers. It's the best introduction you could ask for."
Mariano Conti,
Head of Smart Contracts at Maker Foundation



"There is a lot of content about decentralized finance available but nothing matches this depth and comprehensiveness of this book."
Leighton Cusack, CEO of PoolTogether

CoinGecko Q1 2020 DeFi Survey

89% of users who have heard of DeFi are male and majority are aged between 20-39

CoinGecko Q1 2020 DeFi Survey



CoinGecko ran a Decentralized Finance (DeFi) survey from 19 - 29 March to members of the crypto community.

We wanted to gain insight on the level of awareness of DeFi among our community members.

Campaign: 19 - 29 March 2020

Total number of participants: 694 participants

Survey distribution: CoinGecko's Newsletter, Twitter, Telegram, Instagram, Facebook and LinkedIn.

How many have heard of Decentralized Finance (DeFi)?

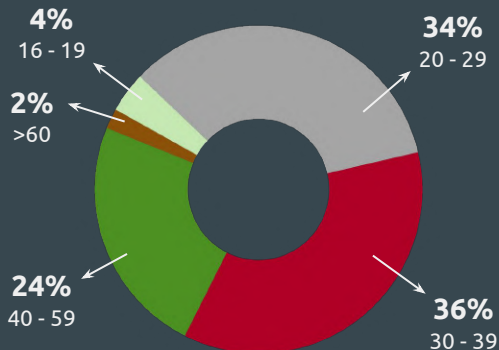
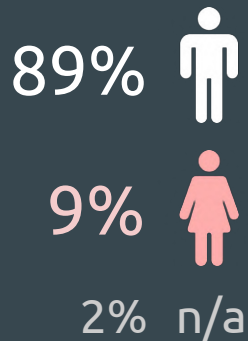
89% (619/684) of the participants have heard of Decentralized Finance (DeFi) at least once in the past 3 months.

DeFi's Outreach - Demographics of those who have heard of DeFi

n=619

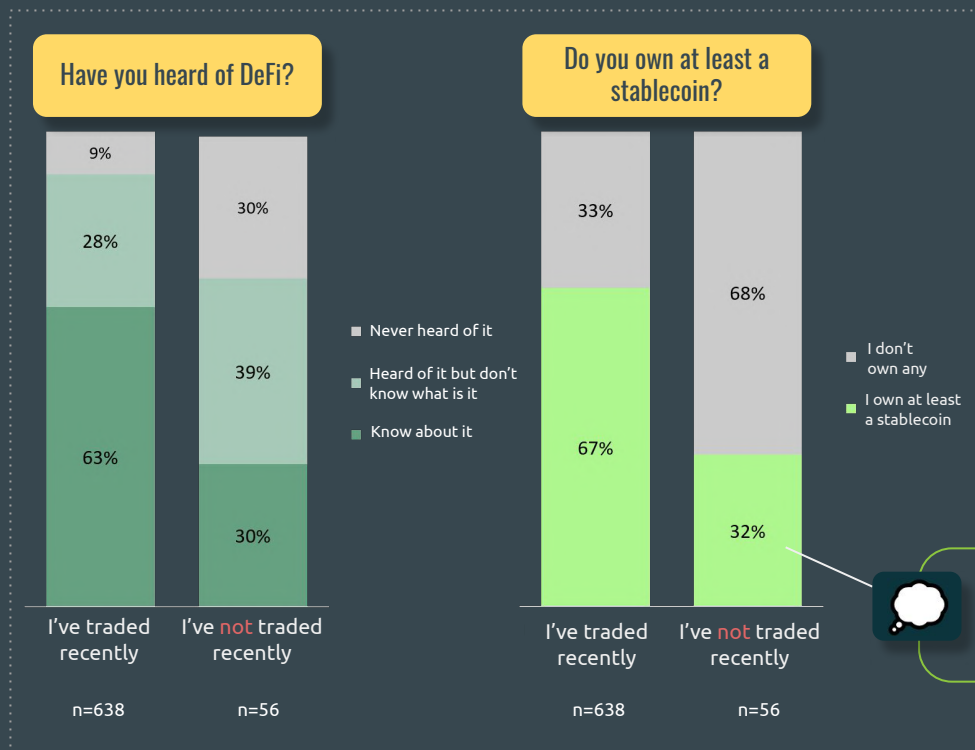
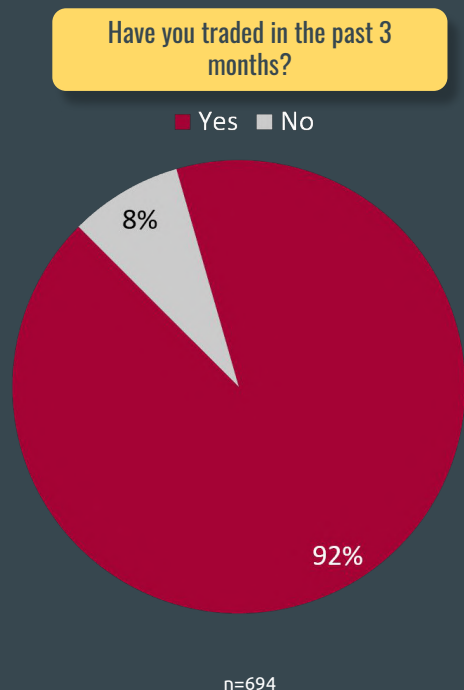
Gender

Age



There is still a seemingly large, unrealized market outside of males aged 20 - 39

90% of those who have traded cryptocurrency recently are aware of DeFi



Over 90% of the users have traded recently and more than half of them reports that they are familiar with DeFi.

It is expected stablecoins are owned more by the recent traders as they are being used as a trading pair for most exchanges.






Top 5 stablecoins owned are similar to the market cap.
However, the rank for DAI, USDC and PAX differ from their market cap.

Top 5 Stablecoins Owned vs Stablecoins Market Capitalization

Tether's ownership is the most popular among survey respondents corresponding to it being the largest stablecoin by market capitalization.

DAI's ownership is the second most popular even though it is only the fifth largest stablecoin based on market capitalization.

This may be that DAI is used more than just a trading pair and locked in DeFi protocols especially Maker (DAI makes up 4% of \$682 million total value locked in DeFi¹).

Stablecoins		Ownership	Market Cap Rank ²
	Tether (USDT)	68%	1
	DAI (DAI)	50%	5
	USD Coin (USDC)	32%	2
	True USD (TUSD)	13%	3
	Paxos Standard (PAX)	10%	4

n=446

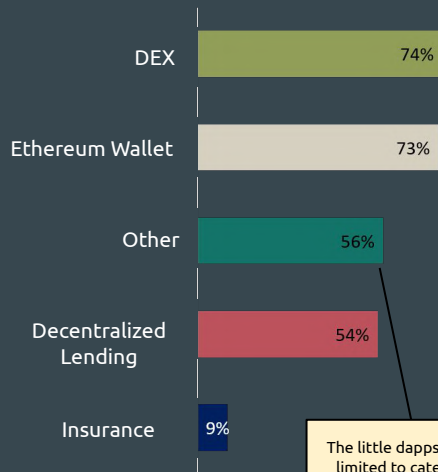
¹ Source: DeFiPulse

² Source: CoinGecko

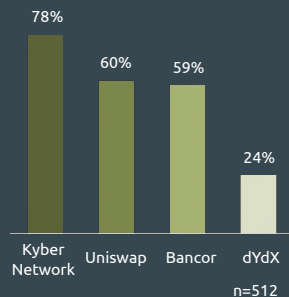
Metamask and Kyber Network dominates brand awareness

Which of the following have you heard of in the past 3 months?

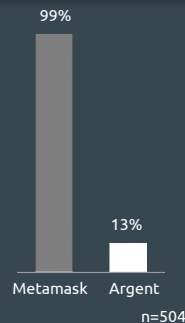
Awareness by category



Decentralized Exchanges (DEX)



Ethereum Wallets

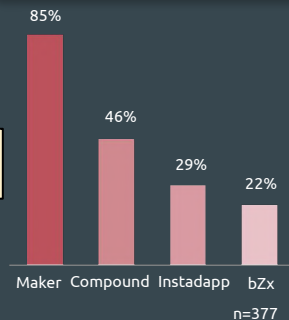


Over 70% of the participants know at least one Dapp in Decentralized Exchange (DEX) with Kyber Network tops the category and Ethereum Wallet.

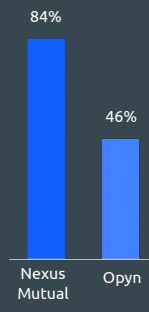
This is expected as Metamask acts as the bridge to the DeFi ecosystem with relatively easy sign-up.

While, Kyber Network is one of the earliest and established player in the DeFi scene as a liquidity provider to various dApps. They're also launching their new update, Katalyst which allows users to stake their KNC.

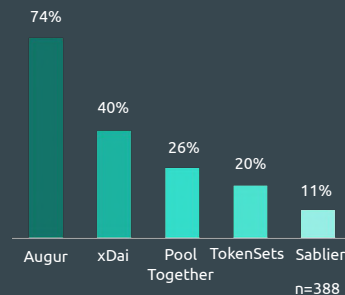
Decentralized Lending



Decentralized Insurance

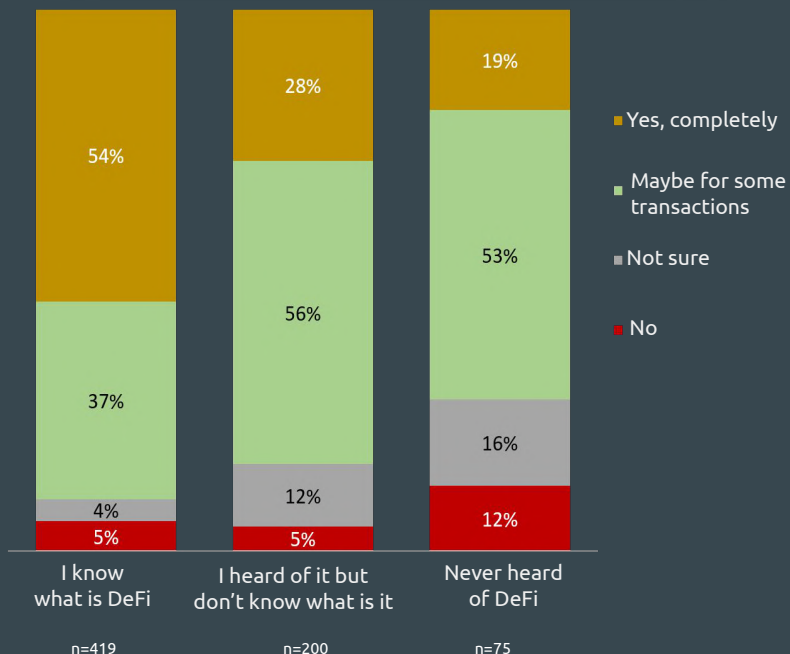


Others



54% of crypto users who are familiar with DeFi would go completely bankless with not trusting the banking system as the main reason

Given the chance, would you stop using banks entirely?



Why?¹

"Yes, Completely"

Do not trust the banking system

31%

DeFi is efficient and convenient

21%

Full ownership of own funds

18%

Investment opportunity

14%

Bank fees are expensive

10%

n=196

"Maybe for some transactions"

Bank-Reliant

25%

Too early/ Little adoption

20%

DeFi is efficient and convenient

19%

DeFi is unsecured

15%

I believe in DeFi future

15%

n=194

Traders feel optimistic about the future of the crypto market despite bleak global economic indicators

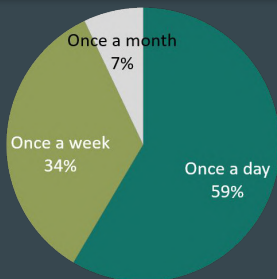
638 out of 694 participants has traded crypto recently



91% of these traders do their research before trading

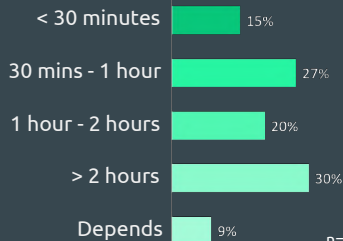


How frequently do you do your research?



n=581

How long does it take?



n=581



n=638

59% of them say COVID-19 does not affect how they trade

What do you feel about the next 12 months?

On Global Economy

Extremely bad (Score 1-2) Bad (3-4) Neutral (5-6) Good (7-8) Extremely good (9-10)



On Crypto Market



n=638

bZx exploited twice in Q1, losing \$1 million



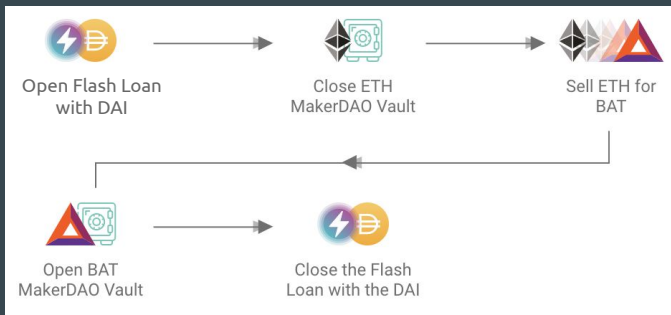
In Q1 2020, decentralized lending protocol, bZx was exploited twice in 5 days, losing about \$1 million. These exploits were highly complex transactions that incorporated the use of **Flash Loans** and multiple DeFi applications. Exploits in DeFi have been a recurring theme and reflects the need for better auditing and security practices by DeFi teams.



Flash Loans

Typically DeFi loans work on an over-collateralized basis. For example, users lock 5 ETH (worth say \$750) in smart contracts to borrow 150 DAI (500% over collateralized).

Flash Loans allows users to take up loans without any collateral provided they pay it back within the same transaction. Flash Loans do not need collateral as they do not suffer from default or illiquidity risk. These transactions are highly complex and are typically only used by developers. Flash Loans are only approved when there is full payback in the same transaction, otherwise they will not be approved.



Here is an example of a **Flash Loan** as explained by Aave. A user may have ETH locked into a MakerDAO Vault to borrow DAI. He has used the DAI to pay off some debt and does not have any more DAI.

He wants to sell ETH to BAT because he believes that ETH price is now high but BAT price is low and will increase in the near future. He can borrow DAI via a **Flash Loan**, send it to MakerDAO to repay his DAI debt and close the Vault.

Now with the ETH, he can sell it for BAT and subsequently open the BAT MakerDAO Vault to generate DAI to repay the Aave **Flash Loan**.

bZx Exploit #1: Slippage attack causing \$355,000 loss

Date: 14 Feb 2020

Loss: 1,271 ETH (worth approximately \$355,000)

DeFi Apps Used: dYdX, Compound, bZx, Kyber Network, Uniswap

1. Flash Loan from dYdX

$\delta Y / \delta X$

Attacker took out a 10,000 ETH flash loan from dYdX



Attacker's Balance:
ETH : 10,000 ETH (from Flash Loan)
wBTC : 0 wBTC

2. Borrow wBTC from Compound



Attacker deposited 5,500 ETH to Compound as collateral. He then took out a loan of 112 wBTC.



Attacker's Balance:
ETH : 10,000 - 5,500 = 4,500 ETH
wBTC : 112 wBTC

3. Short ETH on bZx



Using 1,300 ETH as collateral, attacker opened a 5x short position worth 5,638 ETH on the ETH/BTC pair.



Attacker's Balance:
ETH : 4,500 - 1,300 = 3,200 ETH
wBTC : 112 wBTC

6. Flash Loan Repayment



Attacker used 4,300 ETH to obtain 112 wBTC. 112 wBTC was used to unlock 5,500 ETH collateral at Compound. 1,300 ETH collateral from bZx was defaulted.



Attacker's Balance:
ETH : 71 - 4,300 + 5,500 = 1,271 ETH
wBTC : 0 wBTC

5. Sell wBTC to wETH on Uniswap



Now at favorable rate, attacker sells on Uniswap the 112 wBTC to wETH. Attacker gets 6,871 ETH. This is then used to repay the dYdX Flash Loan



Attacker's Balance:
ETH : 3,200 + 6,871 - 10,000 = 71 ETH
wBTC : 112 - 112 = 0 wBTC

4. Increase wBTC Price on Kyber / Uniswap



5,638 ETH was swapped to 51 wBTC through Kyber's Uniswap reserve. This drove conversion rate up 3x to 1 wBTC = 110 wETH



Attacker's Balance:
ETH : 3,200 ETH
wBTC : 112 wBTC

bZx Exploit #2: Oracle attack causing \$665,000 loss

Date: 18 Feb 2020

Loss: 2,378 ETH (worth approximately \$665,000)

DeFi Apps Used: bZx, Kyber Network, Synthetix, Uniswap

1. Flash Loan from bZx



Attacker opened a 7,500 ETH Flash Loan from bZx



Attacker's Balance:
ETH : 7,500 ETH (from Flash Loan)
sUSD : 0

2. Swap ETH to sUSD on Kyber



Attacker swapped 900 ETH in Kyber and KyberUniswap reserve. This drove sUSD price up to 0.00899 ETH (2.5x higher).



Attacker's Balance:
ETH : $7,500 - 900 = 6,600$ ETH
sUSD : 156,003 sUSD

3. Buy more sUSD on Synthetix



Attacker sent 6,000 ETH to Synthetic Depot and bought 943,837 sUSD at market price.



Attacker's Balance:
ETH : $6,600 - 3,518 = 3,082$ ETH
sUSD : $156,003 + 943,838 = 1,099,841$

6. Flash Loan Repayment



Attacker obtained a profit of 2,378 ETH.



Attacker's Balance:
ETH : 2,378 ETH
sUSD : 0

5. Repaying Flash Loan



Attacker transferred 7,500 ETH to repay the Flash Loan. Attacker left the other loan to default.



Attacker's Balance:
ETH : $9,878 - 7,500 = 2,378$ ETH
sUSD : 0

4. Collecting ETH from bZx



Attacker used 1,099,841 sUSD to borrow 6,796 ETH on bZx at the high sUSD/ETH price from earlier trade. bZx relies on Kyber for price feed.



Attacker's Balance:
ETH : $3,082 + 6,796 = 9,878$ ETH
sUSD : $1,099,831 - 1,099,831 = 0$ sUSD

DeFi's Black Thursday

On 12-13 March, Bitcoin and Ether plunged over 40%.

Demand for DAI increased to protect positions from being liquidated.

+20%

DAI Price Increase on Mar 13

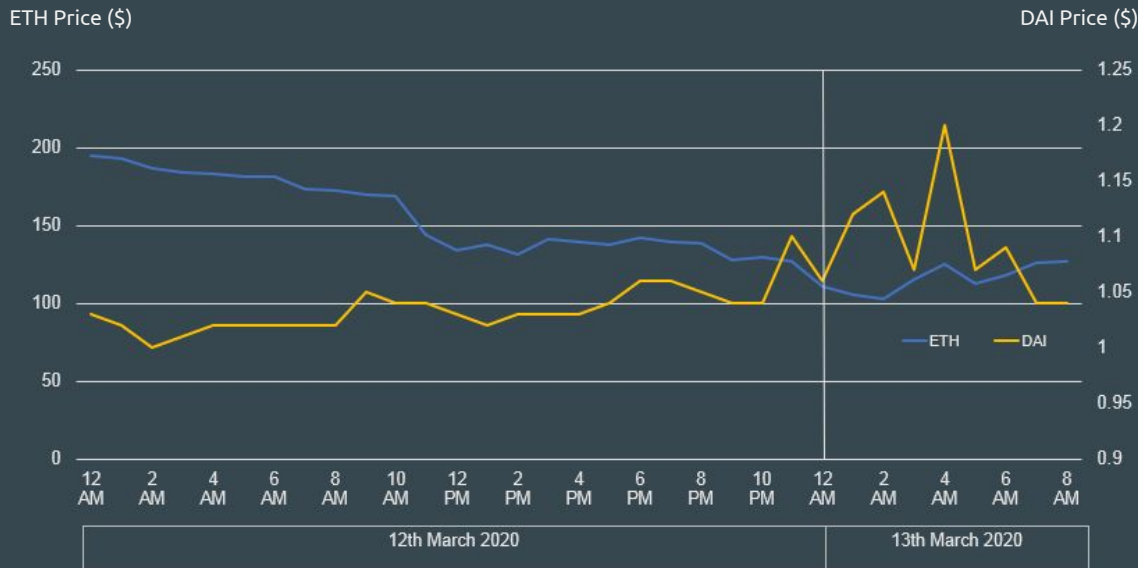
On 12-13 March, the entire market experienced a **major sell off** as COVID-19 fears hit traditional markets and dragged the crypto market along.

Bitcoin (BTC) fell by **40%** while **Ethereum (ETH)** plunged by **45%** within these two days.

This has effectively led to most collateral to be underwater and caused a cascading margin call.

To protect themselves from being liquidated, the demand for Dai increases. DAI experienced a 20% spike. This was due to a mixture of extreme volatility, and was overall an extreme stress test on DeFi.

ETH and DAI Price (12-13 Mar 2020)



Maker's vulnerabilities exploited. Attackers bid 30,000 ETH for \$0



1. Market sell down

ETH dropped from \$194.73 to a low of ~\$80 in the span of 24 hours (~60% drop).



ETH is used as Collateral in many DeFi Applications. ~2.8 mil ETH was locked in DeFi on Mar 12 (<http://defipulse.com/>)



2. Vaults risk liquidation

Due to drop in ETH price, 1,200 Maker Vaults became under-collateralized and were subsequently liquidated.



You can draw up to \$100 per \$150 using ETH as collateral in a Maker Vault. Minimum of 150% Collateral Ratio



3. DAI demand skyrockets

All loans must be repaid in DAI, Vault Liquidators (Keepers) must also bid for collateral in DAI.



Large amount of Vaults at risk of being liquidated = Large demand for DAI



6. \$0 Bids won

Due to low competition in the auctions, lucky liquidators walked away with 30,000 ETH for \$0.



The zero-bid events of March 12-13 led to a collateral auction shortfall amounting to approximately 5.4mil DAI.



5. Keepers failed

Keepers were not configured properly in times of significant ETH Gas Price spikes. Bids failed to process in time.



Only Keepers are allowed to participate in Vault Auctions. Keepers are usually bots configured to bid with funds.



4. High gas prices

ETH Gas price rose exponentially, with >200 Gwei transactions being the norm as people rushed to save/liquidate vaults.



Kyber and several other DApps initially had a contract limit of 200 Gwei set

Maker introduced MKR auction and USDC collateral to recover

Maker Auction



The zero-bid events of March 12-13 led to a collateral auction shortfall amounting to approximately **5.4 million DAI**.



Options discussed included an **Emergency Shutdown which would freeze all DAI**, but was rejected in favour of a Debt Auction.



During a Debt Auction, **MKR is minted** by the system (increasing the amount of MKR in circulation) and **sold to bidders for DAI**.



MKR was auctioned off in lots of 50,000 DAI. **20,980 MKR** was sold for between 220 - 300 DAI/MKR. Average purchase price: **280 DAI/MKR**.

USDC as Collateral



To save the peg and combat DAI liquidity concerns, a Proposal to add USDC as Collateral was made.



USDC helps to create DAI liquidity and push the DAI peg back towards \$1. The mechanism looks like this: Lock USDC -> Mint DAI -> Sell DAI for USDC -> Repeat.



USDC was added with the initial parameters: \$20M Debt Ceiling and 20% Stability Fee and 125% Collateral Ratio and no liquidations.



Introduces Regulatory and Blacklist risks. **Circle can ban addresses** and some amounts of USDC used as collateral according to KYC/AML policies.



DAI Backstop Syndicate was formed by the community to act as a buyer of last resort at 100 DAI/MKR.

Through the Grapevine 🙌👂🍇

What Happened in Crypto?

The Saga between Tron, Steem and Hive

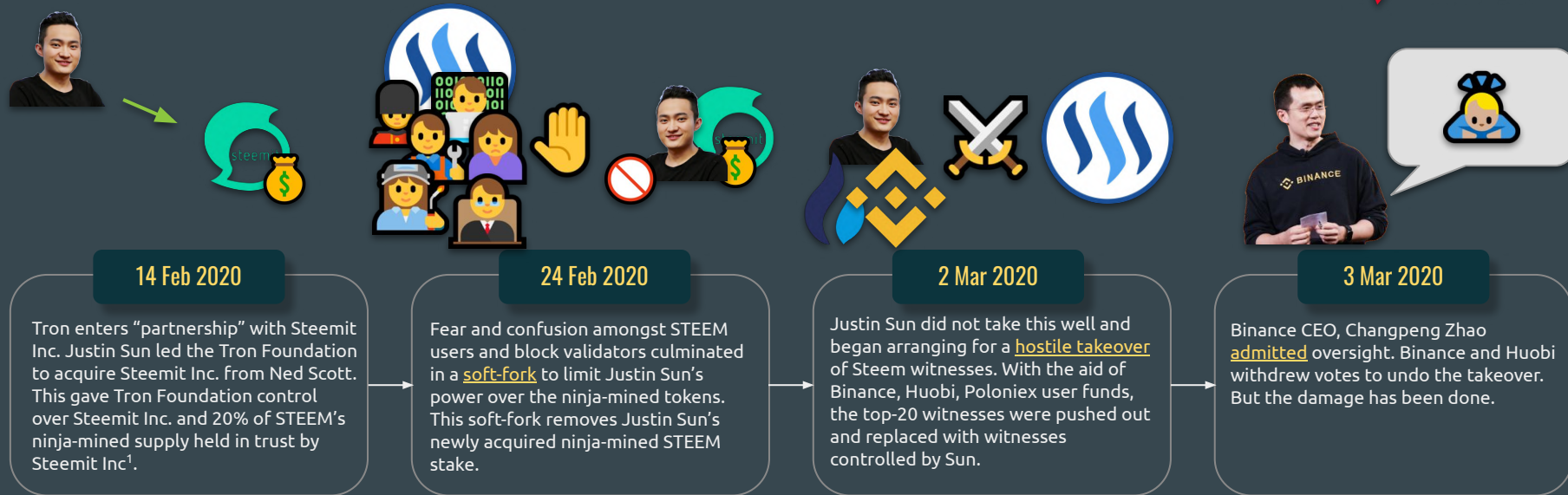
Blockchain governance being tested on the Steem blockchain



+



In Q1 2020, Tron Foundation acquired Steemit Inc, a private company responsible for Steemit.com, the largest decentralized application built on top of the Steem blockchain. There has been a lot of controversies, debates, and disagreements from the community post-acquisition. We looked deeper into events that has taken place.



¹ These ninja-mined STEEM has historically been owned by Steemit Inc. and currently comprises of 62 million STEEM (approximately 20% of STEEM's total supply). The Steemit Inc. team previously made a pledge to never use these tokens for governance and is supposed to be used only for the advancement of the Steem blockchain. However, Steemit Inc. has never made any legally binding agreement to the said pledge.

The Saga between Tron, Steem and Hive

Steem split up: Hive community broke off to form their own blockchain

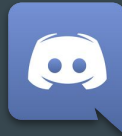


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